

Bug-Proof Lesson Plan

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| YOUR NAME: | William Garske |
| Pick a lesson from your unit in Dr. Grace's class. Write a short summary of that lesson plan. Be sure to describe what technology you plan for your students (and you) to use: | In Lesson 2, Excel VBA (macro enabled) and Microsoft Word equations was included for technology. In this lesson, students learn how to code in Excel and how to write Mathematical Equations in Microsoft Word. |
| <i>GNAT</i> | |
| Look at the class list of possible problems and pick one (or make up your own) that is something that is a temporary problem/issue that could happen to your equipment (the teacher's computer) that would affect your plan. The technology might get fixed before your lesson is over, but might not. What "bug" did you pick: | A temporary problem could include minor problems in coding for VBA. Even the slightest difference in letters dealing with programs could lead to an incorrect/invalid output (error message). Students could also have difficulties using Microsoft Word if they have different years for it on their laptop. |
| What could you do that would allow the learning to continue without the technology or in a modified way? | I have documents saved for teaching students how to code on TI-83 Silver Edition calculators and Mathcad as well. Writing these lesson plans on a white board would be an easy replacement for this technology. Having a general understanding of coding such as <u>for</u> statements and <u>if and while</u> loops will create an easy platform for students to learn how to code in different systems they face later in life. |
| What do you need to do ahead of time so that plan could be carried out? (Do you need handouts? Other materials? ...) | Since I have these document already saved on my computer, I could print out these materials for myself which I could write on the board for the day. Students can do practice problems dealing with coding in C for the calculator. Mathcad provides a general understanding of how to code. |
| <i>BLACK FLY</i> | |
| Look at the class list of possible problems and pick one (or make up your own) that is something that is an all-day problem/issue that could happen to you or your students' equipment that would affect your plan. What "bug" did you pick: | I see downloading Microsoft Excel 2013 could be a pain for my students. They may have more recent or older versions of Excel which may or may not be exactly compatible with learning how to code using my system. I do not predict having really any problems when teaching students how to write equations in Microsoft Word. Writing equations in Microsoft Word is simple, and I would not |

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| | mind my students using a more recent or older version of Microsoft Word. I would want my students to do some investigating on their own to use whatever writing document they are most familiar with. |
| What could you do that would allow the learning to continue without the technology or in a modified way? | I could provide a link for downloading Microsoft Excel 2013. If my school does not offer Microsoft Excel 2013, then I would have to learn the system before then and make appropriate changes to my handouts that show how to code. Worst comes to worst, I could borrow another student's laptop and talk/work through the different methods of coding on Excel using their version. I could do this (I think most teachers would), but I think it would waste too much class time. If students have an incompatible version to code in Excel, then I would learn their version and go over coding on a later date. I would skip this lesson and continue to the next one where we would cover this application a later date. |
| What do you need to do ahead of time so that plan could be carried out? (Do you need handouts? Other materials? ...) | I need to constantly stay up to date and familiarize myself with what versions of Excel the majority of my students have. I need to stay up to date with the times. I would need to bring the next day's lesson to class as well and be prepared to transition my lesson smoothly. |
| <i>DEADLY ASIAN HORNET</i> | |
| Look at the class list of possible problems and pick one (or make up your own) that is something that is a multi-day problem/issue that could happen to you and your students' equipment that would affect your plan. What "bug" did you pick: | There are some nasty affects to coding on VBA for Excel. I was for the longest time afraid to use it and hand out files of it to other computers. One potential hazard includes minimalizing Macro Security which could lead to potentially hazardous loops. Also, huge amounts of codes can cause some laptops to go fuzzy and slow down. I would make sure appropriate settings were on before using these codes. I would also inform my students to not mess with anything else concerning recording Macros. I find recording Macros are potentially hazardous to computers. I have recorded some Macros that have worked out, however, would never advise my students to use it. All a Macro recording is pretty much a Screencast which you can access (except it |

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| | actually clicks those same buttons on your laptop again). |
| What could you do that would allow the learning to continue without the technology or in a modified way? | There is an icon known as Macro Security. I would make sure my students have the correct Macro Security that I do. I would never minimize security to have a code work (too sketch for me!). |
| What do you need to do ahead of time so that plan could be carried out? (Do you need handouts? Other materials? ...) | I need to constantly familiarize myself with my students' computer systems. I would rather damage my laptop, then have them damage theirs. I also need to be vigilant and make sure that my students do not run any potentially dangerous Macros. I know hackers will a lot of times have people download their recorded Macros which is specifically designed to crash your computer/give your information away. I will make sure to inform my students not to download anyone else's recorded Macros (bad news). There is actually a debug button you can hit on your code which will identify potential errors in your code. |